

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): An automatic configuration tool for ~~use with~~ configuring an intelligent electronic device (IED) for a power protection and restoration devices device, comprising:

a processor;

a memory for storing a plurality of databases containing protection, control and monitoring information for power protection and restoration devices;

a graphical user interface; and

an automatic configuration application operating on the processor to provide a plurality of menus to a user on the graphical user interface to enable the user to select a plurality of settings options, the automatic configuration application using the selected settings options and the information in the databases to generate a settings file, the automatic configuration application exporting the settings file to the IED that are processed to determine and export a plurality of configuration settings for a specific power protection and restoration device.

2. (Currently Amended): The automatic configuration tool of claim 1 wherein the automatic configuration application comprises a plurality of settings modules, and a calculation engine ~~and a power protection and restoration device settings file.~~

3. (Currently Amended): The automatic configuration tool of claim 2 wherein the power protection and restoration device is for use in a power system installation and wherein the plurality of settings modules comprises a general application module for enabling the use user to select an application type for a the power system installation.

4. (Currently Amended): The automatic configuration tool of claim 3 wherein the ~~application type is selected for~~ power system installation is a power distribution installation.

5. (Currently Amended): The automatic configuration tool of claim 3 wherein the ~~application type is selected for~~ power system installation is a power transmission installation.

6. (Currently Amended): The automatic configuration tool of claim [4] 3 wherein the application type ~~that the user can select for the distribution system installation~~ is new or retrofit.

7. (Currently Amended): The automatic configuration tool of claim 2 wherein the plurality of settings modules comprises a configuration settings module that enables the user to select a tripping preference and other parameters for the ~~specific~~ power protection and restoration device.

8. (Currently Amended): The automatic configuration tool of claim 7 wherein the tripping preference selection includes either single-phase or three-phase.

9. (Currently Amended): The automatic configuration tool of claim 2 wherein the plurality of settings modules comprises a protection settings module that enables the user to select ~~at least one~~ a protection philosophy preference, ~~a zone sequence coordination preference and a protection curve.~~

10. (Original): The automatic configuration tool of claim 9 wherein the protection philosophy preference selection includes either fuse saving or fuse clearing.

11. (Currently Amended): The automatic configuration tool of claim 2 wherein the plurality of settings modules further comprises a communications settings module

that enables the user to select a communications medium for the ~~specific~~ power protection and restoration device.

12. (Original): The automatic configuration tool of claim 2 wherein the plurality of settings modules further comprises a monitoring settings module that enables the user to select a data recording frequency for at least one of a load profile and a demand metering.

13. (Original): The automatic configuration tool of claim 12 wherein the monitoring settings modules enables the user to select a power quality monitoring preference.

14. (Currently Amended): The automatic configuration tool of claim 2 wherein the plurality of settings modules further comprises a programmable input/output settings module that enables the user to configure a plurality of programmable functions for the ~~specific~~ power protection and restoration device.

15. (Original): The automatic configuration tool of claim 14 wherein the plurality of programmable functions includes at least one of hot line tagging, a blown fuse indication, an overvoltage trip and reclose, and a cold load pickup.

16. (Original): The automatic configuration tool of claim 2 wherein the plurality of settings modules further comprises an oscillographic settings module that enables the user to select an oscillographic recording preference for the ~~specific~~ power protection and restoration device.

17. (Currently Amended): The automatic configuration tool of claim 16 wherein the oscillographic settings module enables the user to select a triggering function for enabling waveform capture of fault and disturbance data for the ~~specific~~ power protection and restoration device.

18. (Currently Amended): The automatic configuration tool of claim 2 wherein the calculation engine includes ~~at least one of~~ a protection coordination engine, a coordination simulator engine and a programmable input/output mapping engine.

19. (Currently Amended): The automatic configuration tool of claim 18 wherein the protection coordination engine determines an overcurrent protection curve and settings to be programmed into the ~~specific~~ power protection and restoration device.

20. (Currently Amended): The automatic configuration tool of claim 18 wherein the coordination simulator engine determines a sequence of events that would occur with ~~a plurality of~~ protection settings for a specific fault current.

21. (Currently Amended): The automatic configuration tool of claim 18 wherein the programmable input/output mapping engine enables the user to configure programmable logic in the ~~specific~~ power protection and restoration device for a plurality of functions.

22. (Original): The automatic configuration tool of claim 1 wherein the plurality of databases includes at least one of a protection philosophy database, a settings information database, a device characteristics database and a previously-entered selections database.

23. (Currently Amended): The automatic configuration tool of claim 2 wherein the automatic configuration application stores the plurality of determined configuration settings in the ~~power protection and restoration device~~ settings file.

24. (Currently Amended): The automatic configuration tool of claim 23 wherein the ~~power protection and restoration device~~ settings file is a web-based file.

25. (Currently Amended): The automatic configuration tool of claim 23 wherein the ~~power protection and restoration device~~ settings file is a an XML file.

26. (Currently Amended): A method for automatically configuring a an intelligent electronic device (IED) for a power protection and restoration device comprising the steps of:

providing a calculation engine;

~~generating~~ providing a plurality of databases to store protection, control and monitoring information for power protection and restoration devices;

selecting a plurality of presented settings options interactively using a graphical user interface;

processing the selected plurality of options using a ~~the~~ calculation engine and the information in the databases to determine a plurality of protection, control and monitoring settings;

creating a ~~protection, control and monitoring~~ settings output file containing the protection, control and monitoring settings; and

automatically downloading the ~~protection, control and monitoring~~ settings output file to an intelligent electronic device for the power protection and restoration device.

27. (Original): The method for automatically configuring of claim 26 wherein the plurality of databases includes at least one of a settings information database, a device characteristics database, a protection philosophy database, and a previously-entered selections database.

28. (Original): The method for automatically configuring of claim 26 wherein the plurality of presented options includes at least one of configuration settings, protection settings, communication settings and monitoring settings.

29. (Original): The method for automatically configuring of claim 28 wherein the plurality of presented options further includes at least one of programmable input/output settings and oscillographic settings.

30. (Original): The method for automatically configuring of claim 28 wherein the configuration settings option enables a user to select a tripping preference and other configuration parameters for the power protection and restoration device.

31. (Original): The method for automatically configuring of claim 28 wherein the protection settings option enables a user to select at least one of a protection philosophy, a zone sequence coordination preference and a protection curve for the power protection and restoration device.

32. (Original): The method for automatically configuring of claim 28 wherein the communication settings option enable a user to select a communications medium for the power protection and restoration device.

33. (Original): The method for automatically configuring of claim 28 wherein the monitoring settings option enables a user to select a data recording frequency for at least one of a load profile and a demand metering.

34. (Original): The method for automatically configuring of claim 28 wherein the monitoring settings option enables a user to select a power quality monitoring preference.

35. (Original): The method for automatically configuring of claim 29 wherein the programmable input/output settings option enables a user to configure a plurality of programmable functions for the power protection and restoration device.

36. (Original): The method for automatically configuring of claim 29 wherein the oscillographic setting option enables a user to select an oscillographic recording preference for the power protection and restoration device.

37. (Original): The method for automatically configuring of claim 26 wherein the calculation engine determines an overcurrent protection curve and protection settings for the power protection and restoration device.

38. (Currently Amended): The method for automatically configuring of claim 26 wherein the calculation engine determines a sequence of events that would occur for a ~~plurality of~~ protection settings for a specific fault current.

39. (Currently Amended): The method for automatically configuring of claim 26 wherein the calculation engine performs mapping operations that ~~enables~~ enable a user to configure programmable logic for a plurality of functions for the power protection and restoration device.

40. (Currently Amended): A computer readable medium encoded with computer-executable instructions to perform the steps of:

storing protection, control and monitoring information for power protection and restoration devices in a plurality of databases;

~~enabling a user to select~~ displaying a plurality of ~~presented~~ settings options ~~interactively using a graphical user interface;~~

receiving selections of the displayed settings options;

processing the ~~selected plurality of options~~ received selections using the information in the databases to determine a plurality of protection, control and monitoring settings;

creating a ~~protection, control and monitoring~~ settings output file containing the protection, control and monitoring settings; and

automatically downloading the ~~protection, control and monitoring~~ settings output file to an intelligent electronic device for the power protection and restoration device.

41. (Original): The computer readable medium of claim 40 wherein the plurality of presented options includes at least one of configuration settings, protection settings, communication settings and monitoring settings.

42. (Original): The computer readable medium of claim 40 wherein the plurality of presented options includes at least one of programmable input/output settings and oscillographic settings.